



6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 60

[EPA-HQ-OAR-2010-0750; FRL-9667-3]

RIN 2060-AQ10

New Source Performance Standards Review for Nitric Acid Plants

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The EPA is finalizing the new source performance standards (NSPS) for nitric acid plants. Nitric acid plants include one or more nitric acid production units (NAPUs). These revisions include a change to the nitrogen oxides (NO_x) emission limit, which applies to each NAPU commencing construction, modification, or reconstruction after October 14, 2011. These revisions also include additional testing and monitoring requirements.

DATES: This final rule is effective on [INSERT THE DATE OF PUBLICATION IN THE FEDERAL REGISTER]. The incorporation by reference of certain publications listed in this rule is approved by the Director of the Federal Register as of [INSERT THE DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: *Docket:* The docket for this action is identified by Docket ID No. EPA-HQ-OAR-2010-0750. All documents in the docket are listed in the www.regulations.gov index. Although listed in

the index, some information is not publicly available (e.g., CBI or other information whose disclosure is restricted by statute). Certain other material, such as copyrighted material, will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through www.regulations.gov or in hard copy at the EPA Docket Center, Public Reading Room, EPA West, Room 3334, 1301 Constitution Ave., NW, Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Air Docket is (202) 566-1742.

FOR FURTHER INFORMATION CONTACT: For questions about these standards for nitric acid plants, contact Mr. Nathan Topham, Sector Policies and Program Division, Office of Air Quality Planning and Standards (D243-02), Environmental Protection Agency, Research Triangle Park, North Carolina 27711, telephone number (919) 541-0483; fax number (919) 541-3207, email address: topham.nathan@epa.gov.

SUPPLEMENTARY INFORMATION:

The information presented in this preamble is organized as follows:

I. General Information

- A. Does this action apply to me?
- B. Where can I get a copy of this document?

C. Judicial Review

II. Background Information

A. What is the statutory authority for this final NSPS?

B. History of the NSPS for Nitric Acid Plants

III. Summary of the Final NSPS

A. What source category is being regulated?

B. What pollutants are emitted from these sources?

C. What are the final requirements for new nitric acid production units?

IV. Summary of Significant Changes Since Proposal

A. How is the EPA revising the proposed emissions limit for affected facilities?

B. How is the EPA revising the testing and monitoring requirements that were proposed for Subpart Ga of Part 60?

C. How is the EPA revising the notification, reporting, and recordkeeping requirements that were proposed for Subpart Ga?

V. Summary of Significant Comments and Responses to the Proposed NSPS

VI. Summary of Cost, Environmental, Energy, and Economic Impacts of These Standards

A. What are the impacts for Nitric Acid Production Units?

B. What are the secondary impacts for Nitric Acid Production Units?

C. What are the economic impacts for Nitric Acid Production Units?

VII. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

B. Paperwork Reduction Act

C. Regulatory Flexibility Act as Amended by the Small Business Regulatory Enforcement Fairness Act (RFA) of 1996 (SBREFA), 5 U.S.C. 601 et seq.

D. Unfunded Mandates Reform Act of 1995

E. Executive Order 13132: Federalism

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

G. Executive Order 13045: Protection of Children from Environmental Health and Safety Risks

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

I. National Technology Transfer and Advancement Act

J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

K. Congressional Review Act

I. General Information

A. Does this action apply to me?

Categories and entities potentially regulated by these revisions include:

Category	NAICS code ¹	Examples of regulated entities
Industry....	325311	Nitrogenous Fertilizer Manufacturing
Federal government...		Not affected
State/local/tribal government...		Not affected

¹ North American Industrial Classification System

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. To determine whether your facility would be regulated by this action, you should examine the applicability criteria in 40 CFR 60.70a. If you have any questions regarding the applicability of this final action to a particular entity, contact the person in the preceding **FOR FURTHER INFORMATION CONTACT** section.

B. Where can I get a copy of this document?

In addition to being available in the docket, an electronic copy of the final action is available on the Worldwide Web (WWW) through the Technology Transfer Network (TTN) website. Following signature, EPA posted a copy of the final action on the TTN

website's policy and guidance page for newly proposed or promulgated rules at www.epa.gov/ttn/oarpg. The TTN website provides information and technology exchange in various areas of air pollution control.

C. Judicial Review

Under CAA section 307(b)(1), judicial review of this final rule is available only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit by [INSERT DATE 60 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER]. Under CAA section 307(d)(7)(B), only an objection to this final rule that was raised with reasonable specificity during the period for public comment (including any public hearing) can be raised during judicial review. This section also provides a mechanism for the EPA to convene a proceeding for reconsideration, "[i]f the person raising an objection can demonstrate to the Administrator that it was impracticable to raise such objection within [the period for public comment] or if the grounds for such objection arose after the period for public comment (but within the time specified for judicial review) and if such objection is of central relevance to the outcome of the rule[.]" Any person seeking to make such a demonstration to us should submit a Petition for Reconsideration to the Office of the Administrator, Environmental Protection Agency, Room 3000, Ariel Rios Building, 1200 Pennsylvania Ave.,

NW., Washington, D.C. 20004, with a copy to the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section, and the Associate General Counsel for the Air and Radiation Law Office, Office of General Counsel (Mail Code 2344A), Environmental Protection Agency, 1200 Pennsylvania Ave., NW, Washington, D.C. 20004. Note, under CAA section 307(b)(2), the requirements established by this final rule may not be challenged separately in any civil or criminal proceedings brought by EPA to enforce these requirements.

II. Background Information

A. What is the statutory authority for this final NSPS?

New source performance standards (NSPS) implement Clean Air Act (CAA) section 111(b), and are issued for categories of sources which cause, or contribute significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare. Section 111 of the CAA requires that NSPS reflect the application of the best system of emission reductions which (taking into consideration the cost of achieving such emission reductions, any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated.

This level of control has sometimes been referred to as "best demonstrated technology" or BDT. In order to better reflect that, CAA section 111 was amended in 1990 to clarify

that "best systems" may or may not be "technology," the EPA is now using the term "best system of emission reduction" or BSER. In assessing whether a standard is achievable, EPA must account for routine operating variability associated with performance of the system on whose performance the standard is based. See National Lime Ass'n v. EPA, 627 F. 2d 416, 431-33 (D.C. Cir. 1980).

Common sources of information as to what constitutes a BSER, and for assessing that technology's level of performance, include test data collected during development of proposed rules, best available control technology (BACT) determinations made as part of new source review (NSR), emissions limits that exist in state and federal permits for recently permitted sources, and emissions test data for demonstrated control technologies collected for compliance demonstration or other purposes. EPA compares permit limitations and BACT determination data with actual performance test data to identify any site-specific factors that could influence general applicability of this information. Also, as part of this review we evaluate if NO_x emissions limits more stringent than those in Subpart G have been established, or if emissions limits have been developed for additional air pollutants.

New source performance standards implement CAA section 111(b), and are issued for categories of sources which cause, or

contribute significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare. The primary purpose of the NSPS is to attain and maintain ambient air quality by ensuring that the best demonstrated emission control technologies are installed as the industrial infrastructure is modernized, when it is most cost effective to build in controls. Since 1970, the NSPS have been successful in achieving long-term emissions reductions in numerous industries by assuring that cost-effective controls are installed on new, reconstructed, or modified sources. Section 111(b)(1)(B) of the CAA requires EPA to periodically review and revise the standards of performance, as necessary, to reflect improvements in methods for reducing emissions.

Existing affected NAPUs that are modified or reconstructed would also be subject to these revisions for affected facilities. Under CAA section 111(a)(4), "modification" means any physical change in, or change in the method of operation of, a stationary source which increases the amount of any air pollutant emitted by such source or which results in the emission of any air pollutant not previously emitted. Changes to an existing NAPU that do not result in an increase in emissions are not considered modifications.

Rebuilt affected NAPUs would become subject to the standards under the reconstruction provisions, regardless of

changes in emission rate. Reconstruction means the replacement of components of an existing NAPU such that (1) the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new NAPU; and (2) it is technologically and economically feasible to meet the applicable standards (40 CFR 60.15).

B. History of the NSPS for Nitric Acid Plants

The NSPS for Nitric Acid Plants (40 CFR part 60, Subpart G) were promulgated in the **Federal Register** on December 23, 1971 (36 FR 24881). The first review of the Nitric Acid Plants NSPS was completed on June 19, 1979 (44 FR 35265). An additional review was completed on April 5, 1984 (49 FR 13654). No changes were made to the NSPS as a result of those reviews. Minor testing and monitoring changes were made during three reviews since the original promulgation in 1971 (October 6, 1975 (40 FR 46258), April 22, 1985 (50 FR 15894), and February 14, 1989 (54 FR 6666)). Subpart G applies to each NAPU constructed or modified after August 17, 1971, and on or before October 14, 2011. Subpart G has an emissions limit of 3.0 lb of NO_x per ton of 100 percent nitric acid produced (based on any 3-hour average) and a 10 percent opacity standard as an additional method of demonstrating compliance with the NO_x emission limit. Continuous NO_x monitors are required as well as recording daily

production rates.

III. Summary of the Final NSPS

A. What source category is being regulated?

Today's standards (Subpart Ga) apply to new NAPUs. The affected facility under the final NSPS is each NAPU. Nitric acid plants may include one or more NAPUs. A new NAPU is defined as a NAPU for which construction, modification, or reconstruction commences after October 14, 2011.

For purposes of these final regulations, a NAPU is defined as any facility producing weak nitric acid by either the pressure or atmospheric pressure process. This definition has not changed from Subpart G.

B. What pollutants are emitted from these sources?

The pollutant to be regulated under section 111(b) in today's action, for new NAPUs, is NO_x, which undergoes reactions in the atmosphere to form particulate matter and ozone. Nitrogen oxides, particulate matter, and ozone are all criteria pollutants that are subject to national ambient air quality standards under section 109 of the Clean Air Act, based on their adverse effects to human health and welfare.

These NAPUs also emit another nitrogen compound known as nitrous oxide (N₂O), which is considered a greenhouse gas (GHG). We are not taking final agency action with respect to a GHG emission standard in this action. The EPA is in the process of

gathering and analyzing additional data on GHG emissions from NAPUs that will allow the Agency to continue working towards a proposal for GHG standards for nitric acid plants.

C. What are the final requirements for new nitric acid production units?

As proposed, and after consideration of the comments we received, we are reducing the NO_x emissions limit from 3.0 pounds of NO_x (expressed as NO₂) per ton of 100 percent nitric acid produced (lb NO_x/ton acid) to 0.50 lb NO_x/ton acid as a 30 operating day emission rate calculated each operating day based on the previous 30 operating days.

The general provisions in 40 CFR part 60 provide that emissions in excess of the level of the applicable emissions limit during periods of startup, shutdown, and malfunction shall not be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard. See 40 CFR 60.8(c). The general provisions, however, may be amended for individual subparts. See 40 CFR 60.8(h). In today's action, the EPA is finalizing standards in Subpart Ga that apply at all times, including periods of startup or shutdown, and periods of malfunction.

Periods of Startup or Shutdown. Consistent with Sierra Club v. EPA (551 F.3d 1019 (D.C. Cir. 2008)), the EPA has established standards in this rule that apply at all times. In revising the

standards in this rule, the EPA has taken into account startup and shutdown periods and, for the reasons explained below, has not established different standards for those periods.

According to information received from industry in the section 114 ICR, NO_x emissions during startup and shutdown are higher than during normal operations for some nitric acid plants. However, due to the relatively short duration of startup and shutdown events (generally a few hours per month) compared to normal steady-state operations, we conclude that a 30-day emission rate calculated based on 30 operating days will allow affected facilities to meet the 0.50 lb NO_x/ton acid at all times, including periods of startup and shutdown.

If higher NO_x emissions during periods of startup and shutdown are a concern, there are two types of equipment that can be used by affected facilities. These include startup heaters and hydrogen peroxide injection. Startup heaters are used to heat the SCR so that it can begin to reduce NO_x during startups. Hydrogen peroxide injection, which is not applicable in all situations, can also be used to decrease NO_x emissions in the extended absorption column.

Periods of Malfunction. As explained in the preamble to the proposed rule, periods of startup, normal operations, and shutdown are all predictable and routine aspects of a source's operations. However, by contrast, malfunction is defined as a

"sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment or a process to operate in a normal or usual manner * * *" (40 CFR 60.2). As explained in more detail in the proposed rule, EPA has determined that CAA section 111 does not require that emissions that occur during periods of malfunction be factored into development of CAA section 111 standards.

Further, accounting for malfunctions would be difficult, if not impossible, given the myriad different types of malfunctions that can occur across all sources in the category and given the difficulties associated with predicting or accounting for the frequency, degree, and duration of various malfunctions that might occur. As such, the performance of units that are malfunctioning is not "reasonably" foreseeable. See, e.g., Sierra Club v. EPA, 167 F. 3d 658, 662 (D.C. Cir. 1999) ("[T]he EPA typically has wide latitude in determining the extent of data-gathering necessary to solve a problem. We generally defer to an agency's decision to proceed on the basis of imperfect scientific information, rather than to 'invest the resources to conduct the perfect study.'"). See also, Weyerhaeuser v. Costle, 590 F.2d 1011, 1058 (D.C. Cir. 1978) ("In the nature of things, no general limit, individual permit, or even any upset provision can anticipate all upset situations. After a certain point, the transgression of regulatory limits caused by 'uncontrollable

acts of third parties,' such as strikes, sabotage, operator intoxication or insanity, and a variety of other eventualities, must be a matter for the administrative exercise of case-by-case enforcement discretion, not for specification in advance by regulation."). In addition, accounting for malfunctions when setting standards of performance under section 111 which reflect the degree of emission limitation achievable through "the application of the best system of emission reduction" that the EPA determines is adequately demonstrated could lead to standards that are significantly less stringent than levels that are achieved by a well-performing non-malfunctioning source. The EPA's approach to malfunctions is consistent with section 111 and is a reasonable interpretation of the statute.

In the event that a source fails to comply with the applicable CAA section 111 standards as a result of a malfunction event, the EPA would determine an appropriate response based on, among other things, the good faith efforts of the source to minimize emissions during malfunction periods, including preventative and corrective actions, as well as root cause analyses to ascertain and rectify violations. The EPA would also consider whether the source's failure to comply with the CAA section 111 standard was, in fact, "sudden, infrequent, not reasonably preventable" and was not instead "caused in part by poor maintenance or careless operation." 40 CFR 60.2

(definition of malfunction).

Finally, the EPA recognizes that even equipment that is properly designed and maintained can sometimes fail and that such failure can sometimes cause a violation of the relevant emission standard. The EPA is therefore finalizing an affirmative defense to civil penalties for violations of emission standards that are caused by malfunctions. See 40 CFR 60.71a (defining "affirmative defense" to mean, in the context of an enforcement proceeding, a response or defense put forward by a defendant, regarding which the defendant has the burden of proof, and the merits of which are independently and objectively evaluated in a judicial or administrative proceeding.). We also have finalized other regulatory provisions to specify the elements that are necessary to establish this affirmative defense; the source must prove by a preponderance of the evidence that it has met all of the elements set forth in 60.74a. (See 40 CFR 22.24). The criteria ensure that the affirmative defense is available only where the event that causes a violation of the emission standard meets the narrow definition of malfunction in 40 CFR 60.2 (sudden, infrequent, not reasonable preventable and not caused by poor maintenance and or careless operation). For example, to successfully assert the affirmative defense, the source must prove by a preponderance of the evidence that the violation "[w]as caused

by a sudden, infrequent, and unavoidable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner..." The criteria also are designed to ensure that steps are taken to correct the malfunction, to minimize emissions in accordance with section 60.72a(b) and to prevent future malfunctions. For example, the source must prove by a preponderance of the evidence that "[r]epairs were made as expeditiously as possible when a violation occurred..." and that "[a]ll possible steps were taken to minimize the impact of the violation on ambient air quality, the environment and human health...." In any judicial or administrative proceeding, the Administrator may challenge the assertion of the affirmative defense and, if the respondent has not met its burden of proving all of the requirements in the affirmative defense, appropriate penalties may be assessed in accordance with Section 113 of the Clean Air Act (see also 40 CFR 22.27).

The EPA proposed and is now finalizing an affirmative defense in this rule in an attempt to balance a tension, inherent in many types of air regulations, to ensure adequate compliance while simultaneously recognizing that despite the most diligent of efforts, emission standards may be violated under circumstances beyond the control of the source. The EPA must establish emission standards that "limit the quantity,

rate, or concentration of emissions of air pollutants on a continuous basis." 42 U.S.C. §7602(k) (defining "emission limitation and emission standard"). See generally Sierra Club v. EPA, 551 F.3d 1019, 1021 (D.C. Cir. 2008). Thus, the EPA is required to ensure that Section 111 emissions standards are continuous. The affirmative defense for malfunction events meets this requirement by ensuring that even where there is a malfunction, the emission standard is still enforceable through injunctive relief. While "continuous" standards, on the one hand, are required, there is also caselaw indicating that in many situations it is appropriate for the EPA to account for the practical realities of technology. For example, in Essex Chemical v. Ruckelshaus, 486 F.2d 427, 433 (D.C. Cir. 1973), the D.C. Circuit acknowledged that in setting standards under CAA section 111 "variant provisions" such as provisions allowing for upsets during startup, shutdown and equipment malfunction "appear necessary to preserve the reasonableness of the standards as a whole and that the record does not support the 'never to be exceeded' standard currently in force." See also, Portland Cement Association v. Ruckelshaus, 486 F.2d 375 (D.C. Cir. 1973). Though intervening caselaw such as Sierra Club v. EPA and the CAA 1977 amendments calls into question the relevance of these cases today, they support the EPA's view that a system that incorporates some level of flexibility is

reasonable. The affirmative defense simply provides for a defense to civil penalties for violations that are proven to be beyond the control of the source. By incorporating an affirmative defense, the EPA has formalized its approach to upset events. In a Clean Water Act setting, the Ninth Circuit required this type of formalized approach when regulating "upsets beyond the control of the permit holder." Marathon Oil Co. v. EPA, 564 F.2d 1253, 1272-73 (9th Cir. 1977). See also, Mont. Sulphur & Chem. Co. v. United States EPA, 2012 U.S. App. LEXIS 1056 (Jan 19, 2012) (rejecting industry argument that reliance on the affirmative defense was not adequate). But see, Weyerhaeuser Co. v. Costle, 590 F.2d 1011, 1057-58 (D.C. Cir. 1978) (holding that an informal approach is adequate). The affirmative defense provisions give the EPA the flexibility to both ensure that its emission standards are "continuous" as required by 42 U.S.C. §7602(k), and account for unplanned upsets and thus support the reasonableness of the standard as a whole.

IV. Summary of Significant Changes Since Proposal

A. How is the EPA revising the proposed emissions limit for affected facilities?

For affected facilities constructed, modified, or reconstructed after October 14, 2011, we proposed to reduce the NO_x emissions limit from 3.0 lb NO_x/ton acid to 0.50 lb NO_x/ton acid as a 30-day emission rate calculated each operating day

based on the previous 30 consecutive operating days. See 76 FR 63878 (October 14, 2011). For these final standards, we are promulgating the proposed NO_x emissions limit of 0.50 lb NO_x/ton acid as a 30 operating day emission rate calculated each operating day based on the previous 30 operating days. In response to commenters' concerns related to how the 30 day emission rate is calculated, we have revised the equation used to calculate the 30 day emission rate. This revision prevents days with very few operating hours from having an artificially large influence on the calculated 30 day emission rate. See Section V of this preamble, Statistical Evaluation of CEMS Data to Determine the NO_x Emission Standard (Updated Memo for Final Standard), and the Response to Comment Document for more information on calculation of the 30 day emission rates. The two documents mentioned above are available in the docket for this final rule.

The conclusion that selective catalytic reduction (SCR) is BSER has not changed from proposal. The justification includes the following reasons: (1) Based on the data available to the Agency, SCR achieves lower emissions than other control technologies; (2) SCR technology is less expensive and more cost effective than nonselective catalytic reduction (NSCR) for control of NO_x emissions; and (3) SCR produces minimal secondary environmental impacts. In addition, we note that SCR is the only

known NO_x control technology being installed in new NAPUs and SCR has been determined to be BACT in several recent BACT determinations.

Although the limit of 0.50 lb NO_x/ton acid is based on the data for SCR, NSPS do not require the use and installation of a specific control device. Whether NSCR can meet the levels achievable by SCR over a long term was an area of uncertainty at proposal. At proposal, the long term CEMS data from 2 NSCR plants (PCS Geismar Train 4 and Agrium Sacramento) indicated that neither plant was achieving the 0.50 lb NO_x/ton limit. After proposal, we evaluated continuous NO_x emission data from Dyno Nobel - St Helens (which uses NSCR) that showed a maximum 30 day emission rate of 0.21 lb NO_x/ton acid. Also, we had monthly data from JR Simplot (another nitric acid plant with NSCR) that ranged from 0.15 to 0.36 lb NO_x/ton acid. Although the data from JR Simplot are not directly comparable to continuous NO_x emission data (hour by hour), there is a strong probability that this source also could comply with 0.50 lb NO_x/ton acid. Therefore, we conclude the standard of 0.50 lb NO_x/ton acid limit is achievable for at least some NAPUs using NSCR.

We conclude that new NAPUs will be able to meet the limit taking into consideration routine operating variability as well as variation due to weather and periods of startup and shutdown as the data analyzed included all of these periods. Based on the

data available to the agency, the limit is demonstrated in practice and achievable for new, modified, or reconstructed sources. See Statistical Evaluation of CEMS Data to Determine the NO_x Emission Standard (Updated Memo for Final Standard), for more information.

B. How is the EPA revising the testing and monitoring requirements that were proposed for Subpart Ga of Part 60?

We are finalizing the testing and monitoring requirements that were proposed for Subpart Ga and adding the requirement of a dual span monitor for reasons explained in Section V of this preamble.

C. How is the EPA revising the notification, reporting, and recordkeeping requirements that were proposed for Subpart Ga?

The reporting and recordkeeping requirements that we proposed are being finalized as separate sections for Subpart Ga. Since proposal, there have been minor changes to the reporting language at §60.77a(e) in relation to EPA's Central Data Exchange (CDX), detailed below, but no other changes have been made to the electronic reporting requirements.

The EPA must have performance test data to conduct effective reviews of CAA section 111 standards, as well as for many other purposes including compliance determinations, emission factor development, and annual emission rate

determinations. In conducting these required reviews, the EPA has found it ineffective and time consuming, not only for us, but also for regulatory agencies and source owners and operators, to locate, collect, and submit performance test data because of varied locations for data storage and varied data storage methods. In recent years, though, stack testing firms have typically collected performance test data in electronic format, making it possible to move to an electronic data submittal system that would increase the ease and efficiency of data submittal and improve data accessibility.

In this action, as a step to increase the ease and efficiency of data submittal and improve data accessibility, EPA is requiring the electronic submittal of select performance test data. Specifically, the EPA is requiring owners and operators of Nitric Acid facilities to submit electronic copies of performance test reports required under Subpart Ga of part 60 to the EPA's WebFIRE database. The WebFIRE database was constructed to store performance test data for use in developing emission factors. A description of the WebFIRE database is available at <http://cfpub.epa.gov/oarweb/index.cfm?action=fire.main>.

As mentioned above, data entry will be through an electronic emissions test report structure called the Electronic Reporting Tool (ERT). The ERT will generate an electronic report which will be submitted using the Compliance and Emissions Data

Reporting Interface (CEDRI). The submitted report is submitted through the EPA's Central Data Exchange (CDX) network for storage in the WebFIRE database making submittal of data very straightforward and easy. A description of the ERT can be found at <http://www.epa.gov/ttn/chief/ert/index.html> and CEDRI can be accessed through the CDX website (www.epa.gov/cdx).

The requirement to submit performance test data electronically to the EPA does not create any additional performance testing and would apply only to those performance tests conducted using test methods that are supported by the ERT. The ERT contains a specific electronic data entry form for most of the commonly used EPA reference methods. A listing of the pollutants and test methods supported by the ERT is available at <http://www.epa.gov/ttn/chief/ert/index.html>. We believe that industry will benefit from this new electronic data submittal requirement. Having these data, the EPA will be able to develop improved emission factors, make fewer information requests, and promulgate better regulations. The information to be reported is already required for the existing test methods and is necessary to evaluate the conformance to the test method.

One major advantage of submitting performance test data through the ERT is a standardized method to compile and store much of the documentation required to be reported by this rule. Another advantage is that the ERT clearly states what testing

information would be required. Another important benefit of submitting these data to the EPA at the time the source test is conducted is that it should substantially reduce the effort involved in data collection activities in the future. When the EPA has performance test data in hand, there will likely be fewer or less substantial data collection requests in conjunction with prospective technology reviews. This results in a reduced burden on both affected facilities (in terms of reduced manpower to respond to data collection requests) and the EPA (in terms of preparing and distributing data collection requests and assessing the results).

State, local, and tribal agencies can also benefit from a more streamlined and accurate review of electronic data submitted to them. The ERT allows for an electronic review process rather than a manual data assessment making review and evaluation of the data and calculations easier and more efficient. Finally, another benefit of submitting data to WebFIRE electronically is that these data will greatly improve the overall quality of the existing and new emission factors by supplementing the pool of emissions test data for establishing emissions factors and by ensuring that the factors are more representative of current industry operational procedures. A common complaint heard from industry and regulators is that emission factors are outdated or not representative of a

particular source category. With timely receipt and incorporation of data from most performance tests, the EPA will be able to ensure that emission factors, when updated, represent the most current range of operational practices. In summary, in addition to supporting regulation development, control strategy development, and other air pollution control activities, having an electronic database populated with performance test data will save industry, state, local, tribal agencies, and the EPA significant time, money, and effort while improving the quality of emission inventories and, as a result, air quality regulations.

Several changes were made to the recordkeeping and reporting provisions related to the affirmative defense provisions of the final rule. In addition to minor wording changes to improve clarity, the EPA added language to 60.74a(a)(9) to clarify that the purpose of the root cause analysis is to determine, correct, and eliminate the primary cause of the malfunction. The root cause analysis itself does not necessarily require that the cause be determined, corrected or eliminated. However, in most cases, the EPA believes that a properly conducted root cause analysis will have such results. The EPA also eliminated the 2-day notification requirement in 60.74a because EPA will receive sufficient notification of malfunction events that result in violations in other required

compliance reports, such as the reports required under 60.77a. In addition, EPA revised 60.74a(b) to state that "[t]he owner or operator seeking to assert an affirmative defense shall submit a written report to the Administrator with all necessary supporting documentation, that it has met the requirements set forth in paragraph (a) of this section. This affirmative defense report shall be included in the first periodic compliance, deviation report or excess emission report otherwise required after the initial occurrence of the violation of the relevant standard (which may be the end of any applicable averaging period). If such compliance, deviation report or excess emission report is due less than 45 days after the initial occurrence of the violation, the affirmative defense report may be included in the second compliance, deviation report or excess emission report due after the initial occurrence of the violation of the relevant standard."

V. Summary of Significant Comments and Responses to the Proposed NSPS

The EPA received comments on a number of issues during the public comment period. These issues include the level and time period of the NO_x standard, NO_x monitoring requirements, issues related to startup and shutdown, and regulation of GHGs from nitric acid plants. Summaries of the major comments and EPA responses are presented in the following paragraphs. Summaries

of comments on these and other issues that are not presented in the preamble, as well as the EPA's responses to those comments, can be found in the Response to Comment Document. The Response to Comment Document is available in the docket for this final rule, EPA-HQ-OAR-2010-0750.

Comment: Multiple commenters supported the EPA's decision to tighten the standard for NO_x emissions. One commenter stated that the revisions to the standard are warranted given the low emissions achieved by well controlled facilities across the industry, as shown in the ICR data, and the lengthy delay in reviewing the NSPS. The commenter asks that the EPA consider the myriad health effects related to NO_x emissions when determining the standard for the final rule. The commenter notes that these effects include direct effects from NO_x exposure as well as effects of secondary pollutants, such as ozone and fine particulate matter, for which NO_x is a precursor.

One commenter agrees that the EPA has clearly demonstrated that its proposed NO_x standard of 0.50 lb/ton based on a 30-day rolling emission rate is not only "achievable" and "adequately demonstrated," it is already routinely being achieved at multiple facilities within the industry. Given the technology-forcing nature of Section 111's BDT standard, the commenter believes that EPA could establish a standard more stringent than its current proposal. Nevertheless, the commenter believes that

the proposed emission limit is within the range of what is reasonable for purposes of the NSPS program.

Another commenter stated that the standard should be more stringent than what was proposed based on the fact that some facilities are achieving lower emissions than the proposed limit. The commenter further stated that the EPA failed to justify why a standard more stringent than 0.50 lb/ton was not proposed. The commenter states that the EPA appeared to accommodate current industry practice rather than comply with the "technology forcing" mandate of CAA section 111.

One commenter suggested that the EPA should set a tighter limit than the proposed standard because "most control systems installed on future affected facilities would achieve emissions below the proposed emissions limit even in the absence of these proposed revisions."

Response: The EPA disagrees with commenters that the emission limit should be more stringent. The EPA believes that the rationale for proposing the standard of 0.50 lb NO_x/ton acid was well supported by the emissions data and continues to be well supported for the final rule. The emissions data from the three ICR test plants that employ SCR (Agrium North Bend, PCS Geismar Train 5, and El Dorado Nitrogen) have no discernible differences in technology or process that would account for the differences in emission levels. Therefore we selected an

emission limit that was achievable by all three of the units controlled by SCR.

Emissions during some short periods (e.g. startup and shutdown) can be higher than during steady state operations at some nitric acid plants. At proposal, we estimated these periods to occur on average about 3 to 4 hours per month. However, as the result of public comments, we have learned that these periods can occur more frequently for some facilities. These periods still make up an extremely small fraction of total operating time (i.e. about 1 percent or less). In response to public comments, the final rule contains a revised method for calculating NO_x emissions. The calculation method used at proposal assumed that each operating day was weighted equally, regardless of the numbers of operating hours during that day. The proposed method could hypothetically lead to a day with only a few operating hours contributing 1/30th of the calculated rolling emission rate. The calculation method used for the final rule has been established such that every hourly NO_x concentration monitored during each 30 unit operating day period is weighted equally. The adjusted calculation calculates each hourly emission rate and divides by the total operating hours. This adjustment prevents infrequent and short duration events from having an unrepresentatively large impact on the 30 day rolling emission rate. Using the adjusted calculation method,

the maximum 30 day rolling emission rate for any of the three ICR test plants with SCR is 0.41 lb NO_x/ton acid at Agrium North Bend.

The EPA also reanalyzed the CEMS data using the assumption that the number of periods of startup and shutdown could be higher for some facilities compared to the number of periods reported for Agrium North Bend. EPA compared the number of startup/shutdown periods for Agrium North Bend to the highest number of startup/shutdown periods reported through the Section 114 request.

According to the information received in response to the Section 114 request, the highest number of hourly startup/shutdown (SS) periods per year was reported as 95 by Coffeyville. Information received after publication of the proposed rule indicates there are reasons that other facilities may startup and shutdown more frequently than the Agrium North Bend facility.

To look at the impact of more frequent start up and shutdown periods, we doubled the 67 hourly SS periods reported by Agrium North Bend to 134 hourly SS periods, which would place them above the highest number of SS periods from any of our Section 114 respondents. Then, we analyzed the CEMS data for Agrium North Bend by assuming that the number of SS periods is doubled. The resulting maximum 30 operating day emission rate is

0.47 lb NO_x/ton acid. This example demonstrates that the limit promulgated in this final rule is achievable by affected facilities that experience more periods of startup and shutdown than the Agrium North Bend plant. See Agrium North Bend Analyses, and Statistical Evaluation of CEMS Data to Determine the NO_x Emission Standard (Updated Memo for Final Standard), available in docket ID: EPA-HQ-OAR-2010-0750. Thus, we conclude that a limit of 0.50 lb NO_x/ton acid is appropriate.

The EPA disagrees with the commenter that stated "the proposed standard appears to simply accommodate current industry practice rather than properly comply with the EPA's technology-forcing mandate under CAA §111." The EPA maintains that SCR is the "best system of emission reduction" even though it is not a new technology. It is unclear what technologies the commenter suggests would work more effectively for controlling NO_x emissions than those evaluated during this rulemaking (SCR and NSCR). Though the CAA is intended to be "technology-forcing," NSPS must be set based on "substantial evidence that such improvements are feasible and will produce the improved performance necessary to meet the standard." Sierra Club v. Costle, 657 F.2d 298, 364 (D.C. Cir. 1981). As one court stated, "[t]he statutory standard is one of achievability, given costs." National Lime Assn. v. EPA, 627 F.2d 416, 431 n.46 (D.C. Cir. 1980). Further, in assessing whether a standard is

achievable, the EPA must account for routine operating variability associated with performance of the system on whose performance the standard is based. See National Lime Ass'n, 627 F. 2d at 431-33. While NSPS are based on the effectiveness of one or more specific technological systems of emissions control, unless certain conditions are met, the CAA does not authorize the EPA to prescribe a particular technological system that must be used to comply with a NSPS. See CAA section 111(b)(5). Rather, sources can select whatever combination of measures will achieve equivalent or greater control of emissions.

Comment: Commenters stated that the EPA did not fulfill the requirements of CAA section 111 because the agency failed to consider the variable conditions present in the industry that impact that achievability of the proposed standard. Specifically, the commenters stated that the EPA failed to consider the costs of adding additional controls to modified or reconstructed facilities that are controlled with NSCR given that the EPA acknowledged that there was uncertainty at the time of the proposed rule that NSCR controlled plants could achieve the 0.50 lb/ton limit.

Another commenter stated that the facilities used to develop the proposed standard are not representative of the industry as a whole because these three facilities use controls that are not in use or not available to all nitric acid plants.

The commenter notes that two of the three plants (PCS Geismar and El Dorado Nitrogen) were designed with dual-pressure technology and other features that minimize emissions. According to the commenter, these technologies may not be available to smaller new plants or modified plants. The commenter also notes that El Dorado Nitrogen has high pressure steam that can be used to pre-heat the SCR and the Agrium North Bend facility uses hydrogen peroxide injection and extended absorption. According to the commenter, these control technologies may not be economically feasible for some facilities. The commenter further states that adding a SCR or NSCR may not be enough to meet the proposed limit for some existing mono-pressure facilities that trigger the NSPS.

Response: The EPA agrees that further evaluation of the achievability of the standard by nitric acid plants that have been modified or reconstructed was warranted prior to issuing the final rule. The commenters identified a few nitric acid plants that fit those definitions, and we performed further evaluation of the NO_x CEMS data for such plants.

A BACT determination has been made on a modified source (Agrium North Bend) for which we have CEMS data. We note that the Agrium North Bend facility is a relatively small, monopressure, modified facility. As part of our evaluation, we analyzed the data for this plant to estimate emissions

performance of this BACT facility and have determined this facility meets the NO_x limit in this final rule. See memo entitled Agrium North Bend Analyses, which is available in the docket for this rulemaking: EPA-HQ-OAR-2010-0750.

As a part of our analysis, we have evaluated the cost for controls required for the Agrium North Bend plant when this facility was modified. An SCR was installed at a capital cost of roughly \$2,700,000 (\$370,000 annualized cost, assuming a 20 year capital recovery period). This facility achieved emissions reductions of nearly 300 tons of NO_x per year. From these figures, we calculate the cost effectiveness for the addition of this control device as roughly \$1,200 per ton of NO_x. See the memo Impacts of Nitric acid NSPS Review-NO_x (Updated Memo for Final NSPS). We conclude this cost effectiveness is reasonable and supported by NSPS for NO_x for other source categories. See 77 FR 9303, 76 FR 24976, 75 FR 51570, and 75 FR 55009.

The EPA has decided to promulgate a limit of 0.50 lb NO_x/ton calculated in a manner that is more appropriate than what was proposed. The calculation in the final rule uses each hourly NO_x emission rate during the 30 day period rather than creating 30 daily values. See Statistical Evaluation of CEMS Data to Determine the NO_x Emission Standard (Updated Memo for Final Standard, and Agrium North Bend Analyses, for more information on the 30 day rolling emission rate calculations. We conclude

that the modified monopressure Agrium North Bend plant would meet this emission limit of 0.50 lb NO_x/ton acid, and that this level is appropriate for future modified and reconstructed sources as well as new sources. For a discussion of the data received from the American Chemistry Council after the proposed rule, see Analysis of Data Received Between Proposal and Promulgation of Part 60, Subpart Ga, which is available in docket ID EPA-HQ-OAR-2010-0750. Also see Response to Comment Document section 7.1-7.3.

At proposal, there was uncertainty as to whether units using NSCR could achieve the proposed limits. We have evaluated CEMS data for two additional plants using NSCR and these facilities do meet the final emission limit. We evaluated continuous NO_x emission data from Dyno Nobel St. Helens. This analysis shows a maximum 30 operating day emission rate of 0.21 lb NO_x/ton acid. Also, we had monthly data from JR Simplot, a nitric acid plant controlled by NSCR, which ranged from 0.15 lb NO_x/ton acid to 0.36 lb NO_x/ton acid. Although monthly data are not directly comparable to continuous hourly NO_x emission data, there is a strong probability that this source controlled by NSCR could comply with 0.50 lb NO_x/ton acid. Therefore, based on our evaluation of this technical information, we conclude the standard of 0.50 lb NO_x/ton acid limit is achievable for at least some nitric acid production units using NSCR.

The conclusion that selective catalytic reduction (SCR) is BSER has not changed from proposal. The justification includes the following reasons: (1) Based on the data available to the Agency, SCR achieves lower emissions than other control technologies; (2) SCR technology is less expensive and more cost effective than nonselective catalytic reduction (NSCR) for control of NO_x emissions; and (3) SCR produces minimal secondary environmental impacts. In addition, we note that SCR is the only known NO_x control technology being installed in new NAPUs and SCR has been determined to be BACT in several recent BACT determinations.

If higher NO_x emissions during periods of startup and shutdown are a concern, there are two types of equipment that can be used by affected facilities. These include startup heaters and hydrogen peroxide injection. Startup heaters are used to heat the SCR to the appropriate operating temperature so that the SCR can be operational during startups, thereby reducing NO_x emissions during startup. Hydrogen peroxide injection, which is not applicable in all situations, can also be used in the extended absorption column to decrease NO_x emissions. Affected facilities could also employ extended absorption to increase the yield of nitric acid; thus reducing the amount of NO_x emitted from the absorption unit. We recognize that there may be circumstances where one or more of these

specific types of equipment or measures may not be feasible. However, based on all of the data and information that we have gathered and analyzed, we conclude any facility (including mono pressure units) that chooses to modify or reconstruct will be able to achieve a limit of 0.50 lb/ton at a reasonable costs by adding controls (e.g., SCR) and or by making other changes such as those described above. Additionally, because the standard is based on 30-day emission rates, even if these technologies are not employed, emissions during brief periods of startup or shutdown should not have substantial impacts on the source's ability to meet the standard.

Comment: Several commenters supported the EPA's decision not to take final agency action with respect to greenhouse gases in today's rule. The commenters stated that the EPA is not obligated to develop standards for GHG as a part of the 8 year review of the NSPS and that the EPA has broad discretion to decide whether and how to regulate greenhouse gases.

Alternatively, some commenters state that the EPA's discretion to develop standards for pollutants not previously subject to NSPS is limited by the language of the statute. The commenters state that the clearest reading of CAA sections 111(a) and 111(b) require the EPA to regulate any pollutant emitted from a listed source category when it is cost effective to do so.

Multiple commenters assert that Congress intended for the EPA to regulate the full scope of air pollution emitted by a source category when developing the initial NSPS because the language of CAA section 111 repeatedly refers to "any" air pollutant emitted by source categories subject to regulation under this section. The commenter asserts that the use of the word "any" as a modifier for "air pollutant" limits the EPA's discretion to decline to set NSPS for pollutants emitted from a listed source category. Although "any" is not included as a modifier for "air pollutant" in Section 111(a)(1)'s definition of "standard of performance," the commenter notes that it is included in the definitions of the term "modification." According to the commenter, under Section 111(b), NSPS standards apply to facilities constructed or modified after standards have been set. The commenter notes that if an existing facility undergoes a modification, a physical change that increases the emission of "any" air pollutant, it is a structure now subject to NSPS. The commenter asserts that reading Section 111 to allow for unlimited agency discretion on which pollutants require performance standards could lead to the peculiarity that a facility could become subject to NSPS regulation by increasing its emissions of a pollutant for which EPA has chosen not to set standards. According to one commenter, the emissions of GHGs from nitric acid plants would warrant listing the nitric acid

plant source category, even in the absence of NO_x emissions. The commenter asserts that the EPA is obligated to set standards for GHGs from nitric acid plants to avoid a situation in which a facility could become subject to NSPS for increased emissions of a pollutant that is not subject to a standard. The commenters say that the same scope that applies when the EPA develops new NSPS exists when the EPA reviews an existing NSPS and requires the EPA to review and update (or develop) the performance standard for all emitted air pollutants.

One commenter states that the EPA must regulate GHGs in this rulemaking action based on the decision by the U.S. Supreme Court in Massachusetts v. EPA, which held that GHGs fall within the CAA definition of "air pollutant". The commenter states that since GHGs are defined as "air pollutants" and Section 111 of the CAA creates a general duty for the EPA to regulate such emissions, it would be unlawful for the EPA to choose not to regulate GHGs in this action. The commenter states that the EPA has failed to provide an adequate explanation for its failure to regulate nitrous oxide and other greenhouse gas emissions from nitric acid plants. According to the commenter, the only way the EPA could legitimately avoid establishing standards for nitrous oxide and other greenhouse gas emissions from nitric acid plants would be if it developed a record clearly demonstrating that such regulations would not be appropriate based on relevant and

lawful considerations. The commenter notes that the EPA has made no effort to make such a showing with respect to nitric acid plants.

Response: While the CAA permits the EPA, under appropriate circumstances, to add new standards of performance for additional pollutants, the EPA is not taking final agency action with regard to standards for GHG at this time.

The EPA has promulgated new performance standards for pollutants not previously covered concurrent with some previous 8-year review rulemakings. See 52 FR 24672, 24710 (July 1, 1987) (considering PM₁₀ controls in future rulemakings); 71 FR 9866 (February 27, 2006) (new PM standards for boilers). Additionally, as commenters correctly point out, the EPA is promulgating a new standard of performance for NO_x emissions from certain affected facilities at nitric acid plants in this rulemaking. The EPA does not yet have adequate information regarding emissions of GHGs from nitric acid plants, the cost and secondary impacts of controlling NO_x and GHGs, and the level of emissions achieved through simultaneous control of GHGs and NO_x. However, because the Agency is in the process of gathering information and reviewing controls for this industry to continue working towards a proposal for GHG standards for nitric acid plants, the EPA is not taking any final action in today's rule with respect to a GHG standard for nitric acid plants.

Comment: Multiple commenters state that the EPA must promulgate section 111(d) standards for existing facilities within the nitric acid sector. One commenter states that promulgation of a performance standard for greenhouse gas emissions from newer nitric acid plants will enable (and compel) EPA to issue emission guidelines and to require states to submit implementation plans demonstrating how they will control greenhouse gas emissions from existing nitric acid plants. The commenter notes that Section 111(d) was meant to be a gap-filling provision intended to regulate this third category, and EPA's main focus was on pollutants rather than source categories. Here, according to the commenter, nitrous oxide and other greenhouse gases are pollutants that endanger public health welfare, and existing nitric acid plants are significant sources of such pollution. According to the commenter, existing nitric acid plants account for the vast majority of the industry's nitrous oxide emissions, and they will continue to do so for some time until older plants eventually retire and are replaced with newer plants. Another commenter recommends that the EPA update section 111(d) standards as soon as possible because these standards are long overdue and technology exists that is capable of reducing emissions.

One commenter states that the EPA should develop emission guidelines for existing sources to prevent "grandfathering" of

existing sources that can occur when section 111(b) is used without concurrent use of section 111(d). The commenter states that the absence of emission guidelines for existing sources creates a disincentive to build new, more environmentally friendly sources. The commenter asserts that there is existing technology to limit emissions from existing sources that is likely cost-effective. Another commenter states that the EPA should develop standards for GHGs from existing nitric acid plants through the collaborative, iterative process of setting section 111(d) emission guidelines given the importance of GHG emissions from existing nitric acid plants.

Response: Emission guidelines for existing sources are developed concurrently or after standards of performance for new, modified, or reconstructed sources. See 40 CFR 60.22(a) ("Concurrently upon or after proposal of standards of performance for the control of a designated pollutant from affected facilities, the Administrator will publish a draft guideline document containing information pertinent to control of the designated pollutant from designated facilities."). See also CAA section 111(d)(1) (emission guidelines are developed for existing sources in a source category for a pollutant "to which a standard of performance under this section would apply if such existing source were a new source"). Under the NSPS program, the Agency only develops section 111(d) existing source

emission guidelines for non-criteria pollutants and non-HAPs.

In this action, we are reviewing and revising the NO_x standard for new, modified, or reconstructed sources under section 111(b). As noted above, Section 111(d) does not provide authority to the Agency to set emission guidelines for existing sources for criteria pollutants, such as NO_x.

With respect to emissions guidelines for existing sources of GHGs, we are not taking final action with respect to GHG emissions from new, modified, or reconstructed sources in today's rule. As noted above, emissions guidelines for existing sources are set concurrently with or after standards for new, modified or reconstructed sources, and so we are also not taking any final action to develop emissions guidelines for existing sources of GHGs.

VI. Summary of Cost, Environmental, Energy, and Economic Impacts of These Standards

In setting standards, the CAA requires us to consider alternative emission control approaches, taking into account the estimated costs as well as impacts on energy, solid waste, and other effects.

A. What are the impacts for Nitric Acid Production Units?

We are presenting estimates of the impacts for 40 CFR part 60, Subpart Ga, the performance standards for new NAPUs constructed or reconstructed after October 14, 2011. The cost,

environmental, and economic impacts presented in this section are expressed as incremental differences between the impacts of NAPUs complying with Subpart Ga and the current NSPS requirements of Subpart G (i.e., baseline). The impacts are presented for future NAPUs that commence construction, reconstruction, or modification over the five years following promulgation of the revised NSPS. To account for variation in the value of money over time, all annualized costs have been scaled to the 2nd quarter of 2010 using the Marshall and Swift Index. The analyses and the documents referenced below can be found in Docket ID No. EPA-HQ-OAR-2010-0750.

In order to determine the incremental impacts of this rule, we first estimated the number of new NAPUs that would become subject to regulation during the five year period after promulgation of Subpart Ga. Based on existing NAPUs and estimated future growth rates, six NAPUs are expected to trigger Subpart Ga NSPS in that five year period. In response to concerns from commenters, we have included five new NAPUs and one modified or reconstructed NAPU in the impact analysis for the final rule. For further detail on the methodology of these calculations, see memorandum Impacts of Nitric Acid NSPS Review—NO_x (Updated Memo for Final NSPS), in Docket ID No. EPA-HQ-OAR-2010-0750.

The Subpart Ga NO_x emission limit being promulgated in this action reflects the control technology currently in use by the industry. The Subpart G NSPS NO_x emissions limit can be achieved using a number of control techniques including NSCR, SCR and HPI. We expect most new facilities to employ SCR to comply with Subpart Ga. Since we expect new units will apply the same control technology to comply with the revised limit being promulgated in today's action as they would have applied to meet the current limit, there is no increase in control costs of meeting the emission limit of 0.50 lb NO_x/ton acid for new NAPUs.

There are differences in notification, testing, monitoring, reporting, and recordkeeping (MRR) between Subpart G and the new Subpart Ga that result in increased costs for new and modified NAPUs. These will include the capital cost of installing an air flow monitor and a dual span NO_x concentration monitor (\$39,000 per NAPU and \$23,000 per NAPU, respectively). These costs represent annualized costs of \$15,000 per NAPU and \$9,000 per NAPU, respectively. Annual costs will also be incurred for reporting, recordkeeping, and stack testing and total \$72,000 for all six NAPUs. The incremental stack testing costs are due to the Appendix F requirements for annual rather than one-time testing for CEMS certification. They were inadvertently omitted from the cost analysis in the proposed rule. These increased costs are the only increased costs that will be incurred by new

facilities as a result of the revised standards being promulgated in today's action. They are shown in Table 2.

The industry-wide cost estimate has been changed from the proposal. In the proposal we estimated that there would be six new sources during the first five years of the new Subpart Ga. We now estimate that there will be one modified source and five new sources during those five years. We estimate that the modified source would install an SCR system at a capital cost of \$2.7 million and a total annualized cost of \$370,000. The costs for the modified source are shown in Table 3.

The potential nationwide emission reduction associated with lowering the NO_x limit from 3.0 to 0.50 lb NO_x/ton acid (100 percent acid basis) is estimated to be about 2100 tons per year (tpy) NO_x.

At proposal, the estimated capital costs and annualized costs for Subpart Ga were \$234,000, and \$90,000, respectively. The cost effectiveness was estimated at \$45 per ton of NO_x. Based on the revised costs estimates discussed above, we currently estimate the final capital costs and annualized costs to be \$3.1 million and \$585,000, respectively, for all six of the production units projected to become subject to subpart Ga between 2012 and 2017. These costs result in a cost effectiveness of about \$280 per ton of NO_x.

The estimated nationwide incremental 5-year NO_x emissions reductions and cost impacts for these revisions are summarized in Table 4 of this preamble. The methodology is detailed in the memorandum Impacts of Nitric Acid NSPS Review—NO_x (Updated Memo for Final NSPS). Further discussion of this cost effectiveness is available in the Section V of this preamble. As discussed in Section V, the cost effectiveness in this NSPS is reasonable and supported by previous NSPS for NO_x.

Table 2. National Incremental NO_x Emission Reductions and Cost Impacts for New Nitric Acid Production Units Subject to Standards Under 40 CFR part 60, Subpart Ga (Fifth Year After Promulgation)

Revisions for future affected facilities	Total Capital Cost [\$1,000]	Total Annualized Cost [\$1,000/yr]	Estimated Annual NO _x Emission Reductions [tons NO _x /yr]	Estimated Cost Effectiveness [\$/ton NO _x]
Revisions to NO _x emission limit	\$0	\$0	1806	----
Revisions to MRR requirements	\$310	\$180	----	----
Total	\$310	\$180	1806	\$100

Table 3. National Incremental NO_x Emission Reductions and Cost Impacts for Modified or Reconstructed Nitric Acid Production Units Subject to Standards Under 40 CFR part 60, Subpart Ga (Fifth Year After Promulgation)

Revisions for future affected facilities	Total Capital Cost [\$1,000]	Total Annualized Cost [\$1,000/yr]	Estimated Annual NO_x Emission Reductions [tons NO_x/yr]	Estimated Cost Effectiveness [\$ /ton NO_x]
Revisions to NO _x emission limit	\$2,700	\$370	299	\$1,200
Revisions to MRR requirements	\$62	\$36	----	----
Total	\$2,762	\$406	299	\$1,360

Table 4. National Incremental NO_x Emission Reductions and Cost Impacts for all Nitric Acid Production Units Subject to Standards Under 40 CFR part 60, Subpart Ga (Fifth Year After Promulgation)*

Revisions for future affected facilities	Total Capital Cost [\$1,000]	Total Annualized Cost [\$1,000/yr]	Estimated Annual NO_x Emission Reductions [tons NO_x/yr]	Estimated Cost Effectiveness [\$ /ton NO_x]
Revisions to NO _x emission limit	\$2,700	\$370	2,104	\$176
Revisions to MRR requirements	\$372	\$215	----	----
Total	\$3,072	\$585	2,104	\$278

*Any small discrepancies between Tables 2,3, and 4 are due to rounding.

B. What are the secondary impacts for Nitric Acid Production Units?

Indirect or secondary air quality impacts are impacts that would result from the increased electricity usage associated with the operation of control devices (i.e., increased secondary emissions of criteria pollutants from power plants). Energy impacts consist of the electricity and steam needed to operate control devices and other equipment that would be required under this final rule. The five new sources would likely install the same control systems to comply with the current Subpart G NO_x emission limit or this Subpart Ga NO_x emission limit. The revisions being finalized in today's rule require the addition of exhaust gas flow monitors and dual span NO_x concentration monitors, which would result in minimal secondary air impacts or increase in overall energy demand.

For the one modification expected to take place over the next five years, the installation of an SCR is expected. This addition will result in secondary air impacts and/or an increase in overall energy demand. However, the reductions in NO_x emissions achieved through installation of this control equipment will greatly outweigh any secondary air impacts associated with increased electricity use. See Secondary Impact Analysis - SCR.

C. What are the economic impacts for Nitric Acid Production Units?

We performed an economic impact analysis that estimates changes in prices and output for NAPUs nationally using the annual compliance costs estimated for this rule. All estimates are for the fifth year after promulgation since this is the year for which the compliance cost impacts are estimated. The impacts to producers and consumers affected by this rule are slightly higher product prices and slightly lower outputs. Prices for products (nitric acid) from affected plants should increase by less than 0.36 percent for the fifth year. The output of nitric acid should decrease by less than 1.20 percent for the fifth year. Hence, the overall economic impact of this NSPS should be low on the affected industries and their consumers. For more information, please refer to the Economic Impact Analysis for this rulemaking in the public docket.

VII. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review.

This action is not a "significant regulatory action" under the terms of Executive Order 12866 (58 FR 51735, October 4, 1993) and is therefore not subject to review under Executive Orders 12866 and 13563 (76 FR 3821, January 21, 2011).

B. Paperwork Reduction Act.

The information collection requirements in this final rule

have been submitted for approval to the Office of Management and Budget (OMB) under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. The information collection requirements are not enforceable until OMB approves them.

These revisions to the existing new source performance standards for NAPUs add monitoring requirements for future affected facilities. We have revised the ICR for the existing rule.

These revisions to the new source performance standards for NAPUs for future affected facilities include a change to the emission limit and additional continuous monitoring requirements. The monitoring requirements include installing a continuous flow monitor and a dual span NO_x concentration monitor, and monitoring the nitric acid production rate and concentration. These monitoring requirements are in addition to a CEMS for NO_x concentration which is required under the current Subpart G. These requirements are based on specific requirements in Subpart Ga which are mandatory for all operators subject to NSPS. These recordkeeping and reporting requirements are specifically authorized by section 114 of the CAA (42 U.S.C. 7414). All information submitted to the EPA pursuant to the recordkeeping and reporting requirements for which a claim of confidentiality is made is safeguarded according to the EPA policies set forth in 40 CFR part 2, subpart B.

When a malfunction occurs, sources must report them according to the applicable reporting requirements of 40 CFR part 60, subpart Ga. An affirmative defense to civil penalties for violations of emission standard that are caused by malfunctions is available to a source if it can demonstrate that certain criteria and requirements are satisfied. The criteria ensure that the affirmative defense is available only where the event that causes a violation of the emission standard meets the narrow definition of malfunction in 40 CFR 60.2 (sudden, infrequent, not reasonable preventable, and not caused by poor maintenance and or careless operation) and where the source took necessary actions to minimize emissions. In addition, the source must meet certain notification and reporting requirements. For example, the source must prepare a written root cause analysis and submit a written report to the Administrator documenting that it has met the conditions and requirements for assertion of the affirmative defense.

For this rule, EPA is adding affirmative defense to the estimate of burden in the ICR. To provide the public with an estimate of the relative magnitude of the burden associated with an assertion of the affirmative defense position adopted by a source, the EPA has provided administrative adjustments to this ICR that shows what the notification, recordkeeping, and reporting requirements associated with the assertion of the

affirmative defense might entail. The EPA's estimate for the required notification, reports, and records, including the root cause analysis, associated with a single incident totals approximately \$3,141, and is based on the time and effort required of a source to review relevant data, interview plant employees, and document the events surrounding a malfunction that has caused a violation of an emission standard. The estimate also includes time to produce and retain the record and reports for submission to the EPA.

The EPA provides this illustrative estimate of this burden because these costs are only incurred if there has been a violation and a source chooses to take advantage of the affirmative defense. Given the variety of circumstances under which malfunctions could occur, as well as differences among sources' operation and maintenance practices, we cannot reliably predict the severity and frequency of malfunction-related excess emissions events for a particular source. It is important to note that the EPA has no basis currently for estimating the number of malfunctions that would qualify for an affirmative defense. Current historical records would be an inappropriate basis, as source owners or operators previously operated their facilities in recognition that they were exempt from the requirement to comply with emissions standards during malfunctions. Of the number of violation events reported by

source operators, only a small number would be expected to result from a malfunction (based on the definition above), and only a subset of violations caused by malfunctions would result in the source choosing to assert the affirmative defense. Thus, we believe the number of instances in which source operators might be expected to avail themselves of the affirmative defense will be extremely small.

For this reason, we estimate no more than 2 such occurrences for all sources subject to 40 CFR part 60, subpart Ga over the 3-year period covered by this ICR. We expect to gather information on such events in the future, and will revise this estimate as better information becomes available.

The annual burden for this information collection averaged over the first 3 years of this ICR is estimated to total 968 labor-hours per year at a cost of \$91,800 per year. The annualized capital costs are estimated at \$19,300 per year. The annualized operation and maintenance (O&M) costs are \$23,500. The total annualized capital and O&M costs are \$42,800 per year. Burden is defined at 5 CFR 1320.3(b).

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for the EPA's regulations in 40 CFR are listed in 40 CFR part 9.

C. Regulatory Flexibility Act as Amended by the Small Business Regulatory Enforcement Fairness Act (RFA) of 1996 SBREFA), 5 U.S.C. 601 et seq.

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that this rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of this rule on small entities, small entity is defined as: (1) a small business as defined by the Small Business Administration's regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of this rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. This certification is based on the economic impact of

this action to all affected small entities. Only four small entities may be impacted by this rule. This is an estimate that may overstate small entity impacts in that we assume each existing small entity will have a new source subject to this rule, which is unlikely. We estimate that all affected small entities will have annualized costs of less than 0.2 percent of their sales.

For more information on the small entity impacts associated with this rule, please refer to the Economic Impact and Small Business Analyses in the public docket. Although this rule would not have a significant economic impact on a substantial number of small entities, the EPA nonetheless tried to reduce the impact of this rule on small entities. When developing the revised standards, the EPA took special steps to ensure that the burdens imposed on small entities were minimal. The EPA conducted several meetings with industry trade associations to discuss regulatory options and the corresponding burden on industry, such as recordkeeping and reporting.

D. Unfunded Mandates Reform Act

This rule does not contain a federal mandate that may result in expenditures of \$100 million or more for state, local, and tribal governments, in the aggregate, or to the private sector in any one year. This rule is not expected to impact state, local, or tribal governments. The nationwide annualized

cost of this rule for affected industrial sources is \$585,000/yr. Thus, this rule is not subject to the requirements of sections 202 and 205 of the Unfunded Mandates Reform Act (UMRA).

This rule is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments. This rule will not apply to such governments and will not impose any obligations upon them.

E. Executive Order 13132, Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. Nitric acid plants are privately owned companies and there will be no direct impact on states and other federal offices. Thus, Executive Order 13132 does not apply to this rule. In the spirit of Executive Order 13132, and consistent with the EPA policy to promote communications between the EPA and state and local governments, the EPA specifically solicited comment on this rule from state and local officials.

F. Executive Order 13175, Consultation and Coordination with Indian Tribal Governments

This action does not have tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000). It will not have substantial direct effects on tribal governments, on the relationship between the federal government and Indian tribes, or on the distribution of power and responsibilities between the federal government and Indian tribes, as specified in Executive Order 13175. This rule imposes requirements on owners and operators of NAPUs and not tribal governments. We do not know of any NAPUs owned or operated by Indian tribal governments. However, if there are any, the effect of this rule on communities of tribal governments would not be unique or disproportionate to the effect on other communities. Thus, Executive Order 13175 does not apply to this action.

G. Executive Order 13045: Protection of Children from Environmental Health and Safety Risks

The EPA interprets Executive Order 13045 (62 F.R. 19885, April 22, 1997) as applying to those regulatory actions that concern health or safety risks, such that the analysis required under section 5-501 of the Executive Order has the potential to influence the regulation. This action is not subject to Executive Order 13045 because it is based solely on technology performance. Nevertheless, this action will result in reductions in NO_x emissions which will provide some increased protection of health for people of all ages including children.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not a "significant energy action" as defined in Executive Order 13211 (66 FR 28355 (May 22, 2001)), because it is not likely to have a significant adverse energy effect on the supply, distribution, or use of energy. This action will not create any new requirements for sources in the energy supply, distribution, or use sectors.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA"), Public Law No. 104-113 (15 U.S.C. 272 note), directs the EPA to use voluntary consensus standards (VCS) in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. VCS are technical standards (e.g., materials specifications, test methods, sampling procedures, business practices) that are developed or adopted by voluntary consensus standards bodies. NTTAA directs the EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable VCS.

This final rulemaking involves technical standards. The EPA is using the following: ASTM D6348-03, Standard Test Method for Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy, and

ASTM E1584-11, Standard Test Method for Assay of Nitric Acid, which have been incorporated by reference.

J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 12898 (59 FR 7629, February 16, 1994) establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

The EPA has determined that this final rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it increases the level of environmental protection for all affected populations without having any disproportionately high and adverse human health or environmental effects on any population, including any minority or low-income population. The EPA has also determined that a proximity-based demographic study comparing populations in closest proximity to the regulated

sources to the general population is not appropriate for this rulemaking due to lack of pollutants with localized effects.

K. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801, et seq., as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that, before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The EPA will submit a report containing this final rule and other required information to the United States Senate, the United States House of Representatives, and the Comptroller General of the United States prior to publication of the final rule in the Federal Register. A major rule cannot take effect until 60 days after it is published in the Federal Register. This action is not a "major rule" as defined by 5 U.S.C. 804(2). The final rules will be effective on [INSERT THE DATE OF PUBLICATION OF THIS FINAL RULE IN THE FEDERAL REGISTER].

List of Subjects in 40 CFR Part 60

Environmental protection, Administrative practice and procedure, Air pollution control, Incorporation by reference, Intergovernmental relations, Reporting and recordkeeping requirements.

Dated: May 14, 2012

Lisa P. Jackson,
Administrator.

For the reasons stated in the preamble, title 40, chapter I, of the Code of Federal Regulations is amended as follows:

PART 60 - [AMENDED]

1. The authority citation for part 60 continues to read as follows:

Authority: 42 U.S.C. 7401 et seq.

Subpart A—[Amended]

2. Section 60.17 is amended by revising paragraph (a)(82), adding and reserving paragraphs (a)(97) and (a)(98), and adding paragraph (a)(99) to read as follows:

§60.17 Incorporations by reference.

* * * * *

(a) * * *

(82) ASTM D6348-03, Standard Test Method for Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy, approved October 1, 2003, IBR approved for §60.73a(b) of subpart Ga of this part, table 7 of subpart IIII of this part, and table 2 of subpart JJJJ of this part.

* * * * *

(99) ASTM E1584-11, Standard Test Method for Assay of Nitric Acid, approved August 1, 2011, IBR approved for §60.73a(c) of subpart Ga of this part.

* * * * *

3. Section 60.70 is amended by revising paragraph (b) to read as follows:

§60.70 Applicability and designation of affected facility.

* * * * *

(b) Any facility under paragraph (a) of this section that commences construction or modification after August 17, 1971, and on or before October 14, 2011 is subject to the requirements of this subpart. Any facility that commences construction or modification after October 14, 2011 is subject to subpart Ga of this part.

4. Add Subpart Ga to read as follows:

Subpart Ga—Standards of Performance for Nitric Acid Plants for Which Construction, Reconstruction, or Modification Commenced After October 14, 2011

Sec.

60.70a Applicability and designation of affected facility.
60.71a Definitions.
60.72a Standards.
60.73a Emissions testing and monitoring.
60.74a Affirmative defense for violations of emission standards during malfunction.
60.75a Calculations.
60.76a Recordkeeping.
60.77a Reporting.

Subpart Ga—Standards of Performance for Nitric Acid Plants for Which Construction, Reconstruction, or Modification Commenced After October 14, 2011

§60.70a Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to each

nitric acid production unit, which is the affected facility.

(b) This subpart applies to any nitric acid production unit that commences construction or modification after October 14, 2011.

§60.71a Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

Affirmative defense means, in the context of an enforcement proceeding, a response or defense put forward by a defendant, regarding which the defendant has the burden of proof, and the merits of which are independently and objectively evaluated in a judicial or administrative proceeding.

Monitoring system malfunction means a sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. You are required to implement monitoring system repairs in response to monitoring system malfunctions or out-of-control periods, and to return the monitoring system to operation as expeditiously as practicable.

Nitric acid production unit means any facility producing weak nitric acid by either the pressure or atmospheric pressure process.

Operating day means a 24-hour period beginning at 12:00 a.m. during which the nitric acid production unit operated at any time during this period.

Weak nitric acid means acid which is 30 to 70 percent in strength.

§60.72a Standards.

Nitrogen oxides. On and after the date on which the performance test required to be conducted by §60.73a(e) is completed, you may not discharge into the atmosphere from any affected facility any gases which contain NO_x, expressed as NO₂, in excess of 0.50 pounds (lb) per ton of nitric acid produced, as a 30-day emission rate calculated based on 30 consecutive operating days, the production being expressed as 100 percent nitric acid. The emission standard applies at all times.

§60.73a Emissions testing and monitoring.

(a) General emissions monitoring requirements. You must install and operate a NO_x concentration (ppmv) continuous emissions monitoring system (CEMS). You must also install and operate a stack gas flow rate monitoring system. With measurements of stack gas NO_x concentration and stack gas flow rate, you will determine hourly NO_x emissions rate (e.g., lb/hr) and with measured data of the hourly nitric acid production (tons), calculate emissions in units of the applicable emissions limit (lb/ton of 100 percent acid

produced). You must operate the monitoring system and report emissions during all operating periods including unit startup and shutdown, and malfunction.

(b) Nitrogen oxides concentration continuous emissions monitoring system. (1) You must install, calibrate, maintain, and operate a CEMS for measuring and recording the concentration of NO_x emissions in accordance with the provisions of §60.13 and Performance Specification 2 of Appendix B and Procedure 1 of Appendix F of this part. You must use cylinder gas audits to fulfill the quarterly auditing requirement at section 5.1 of Procedure 1 of Appendix F of this part for the NO_x concentration CEMS.

(2) For the NO_x concentration CEMS, use a span value, as defined in Performance Specification 2, section 3.11, of Appendix B of this part, of 500 ppmv (as NO₂). If you emit NO_x at concentrations higher than 600 ppmv (e.g., during startup or shutdown periods), you must apply a second CEMS or dual range CEMS and a second span value equal to 125 percent of the maximum estimated NO_x emission concentration to apply to the second CEMS or to the higher of the dual analyzer ranges during such periods.

(3) For conducting the relative accuracy test audits, per Performance Specification 2, section 8.4, of Appendix B of this part and Procedure 1, section 5.1.1, of Appendix F of this part,

use either EPA Reference Method 7, 7A, 7C, 7D, or 7E of Appendix A-4 of this part; EPA Reference Method 320 of Appendix A of part 63 of this chapter; or ASTM D6348-03 (incorporated by reference, see §60.17). To verify the operation of the second CEMS or the higher range of a dual analyzer CEMS described in paragraph (b)(2) of this section, you need not conduct a relative accuracy test audit but only the calibration drift test initially (found in Performance Specification 2, section 8.3.1, of Appendix B of this part) and the cylinder gas audit thereafter (found in Procedure 1, section 5.1.2, of Appendix F of this part).

(4) If you use EPA Reference Method 7E of Appendix A-4 of this part, you must mitigate loss of NO₂ in water according to the requirements in paragraphs (b)(4)(i), (ii), or (iii) of this section and verify performance by conducting the system bias checks required in EPA Reference Method 7E, section 8, of Appendix A-4 of this part according to (b)(4)(iv) of this section, or follow the dynamic spike procedure according to paragraph (b)(4)(v) of this section.

(i) For a wet-basis measurement system, you must measure and report temperature of sample line and components (up to analyzer inlet) to demonstrate that the temperatures remain above the sample gas dew point at all times during the sampling.

(ii) You may use a dilution probe to reduce the dew point of the sample gas.

(iii) You may use a refrigerated-type condenser or similar device (e.g., permeation dryer) to remove condensate continuously from sample gas while maintaining minimal contact between condensate and sample gas.

(iv) If your analyzer measures nitric oxide (NO) and nitrogen dioxide (NO₂) separately, you must use both NO and NO₂ calibration gases. Otherwise, you must substitute NO₂ calibration gas for NO calibration gas in the performance of system bias checks.

(v) You must conduct dynamic spiking according to EPA Reference Method 7E, section 16.1, of Appendix A-4 of this part using NO₂ as the spike gas.

(5) Instead of a NO_x concentration CEMS meeting Performance Specification 2, you may apply an FTIR CEMS meeting the requirements of Performance Specification 15 of Appendix B of this part to measure NO_x concentrations. Should you use an FTIR CEMS, you must replace the Relative Accuracy Test Audit requirements of Procedure 1 of appendix F of this part with the validation requirements and criteria of Performance Specification 15, sections 11.1.1 and 12.0, of Appendix B of this part.

(c) Determining NO_x mass emissions rate values. You must use the NO_x concentration CEMS, acid production, gas flow rate

monitor and other monitoring data to calculate emissions data in units of the applicable limit (lb NO_x/ton of acid produced expressed as 100 percent nitric acid).

(1) You must install, calibrate, maintain, and operate a CEMS for measuring and recording the stack gas flow rates to use in combination with data from the CEMS for measuring emissions concentrations of NO_x to produce data in units of mass rate (e.g., lb/hr) of NO_x on an hourly basis. You will operate and certify the continuous emissions rate monitoring system (CERMS) in accordance with the provisions of §60.13 and Performance Specification 6 of Appendix B of this part. You must comply with the following provisions in (c)(1)(i) through (iii) of this section.

(i) You must use a stack gas flow rate sensor with a full scale output of at least 125 percent of the maximum expected exhaust volumetric flow rate (see Performance Specification 6, section 8, of Appendix B of this part).

(ii) For conducting the relative accuracy test audits, per Performance Specification 6, section 8.2 of Appendix B of this part and Procedure 1, section 5.1.1, of Appendix F of this part, you must use either EPA Reference Method 2, 2F, or 2G of Appendix A-4 of this part. You may also apply Method 2H in conjunction with other velocity measurements.

(iii) You must verify that the CERMS complies with the quality assurance requirements in Procedure 1 of Appendix F of this part. You must conduct relative accuracy testing to provide for calculating the relative accuracy for RATA and RAA determinations in units of lb/hour.

(2) You must determine the nitric acid production parameters (production rate and concentration) by installing, calibrating, maintaining, and operating a permanent monitoring system (e.g., weigh scale, volume flow meter, mass flow meter, tank volume) to measure and record the weight rates of nitric acid produced in tons per hour. If your nitric acid production rate measurements are for periods longer than hourly (e.g., daily values), you will determine average hourly production values, tons acid/hr, by dividing the total acid production by the number of hours of process operation for the subject measurement period. You must comply with the following provisions in (c)(2)(i) through (iv) of this section.

(i) You must verify that each component of the monitoring system has an accuracy and precision of no more than ± 5 percent of full scale.

(ii) You must analyze product concentration via titration or by determining the temperature and specific gravity of the nitric acid. You may also use ASTM E1584-11 (incorporated by reference, see §60.17), for determining the concentration of

nitric acid in percent. You must determine product concentration daily.

(iii) You must use the acid concentration to express the nitric acid production as 100 percent nitric acid.

(iv) You must record the nitric acid production, expressed as 100 percent nitric acid, and the hours of operation.

(3) You must calculate hourly NO_x emissions rates in units of the standard (lb/ton acid) for each hour of process operation. For process operating periods for which there is little or no acid production (e.g., startup or shutdown), you must use the average hourly acid production rate determined from the data collected over the previous 30 days of normal acid production periods (see §60.75a).

(d) Continuous monitoring system. For each continuous monitoring system, including NO_x concentration measurement, volumetric flow rate measurement, and nitric acid production measurement equipment, you must meet the requirements in paragraphs (d)(1) through (3) of this section.

(1) You must operate the monitoring system and collect data at all required intervals at all times the affected facility is operating except for periods of monitoring system malfunctions or out-of-control periods as defined in Appendix F, sections 4 and 5, of this part, repairs associated with monitoring system

malfunctions or out-of-control periods, and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks and required zero and span adjustments.

(2) You may not use data recorded during monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, or required monitoring system quality assurance or control activities in calculations used to report emissions or operating levels. You must use all the data collected during all other periods in calculating emissions and the status of compliance with the applicable emissions limit in accordance with §60.72a(a).

(e) Initial performance testing. You must conduct an initial performance test to demonstrate compliance with the NO_x emissions limit under §60.72a(a) beginning in the calendar month following initial certification of the NO_x and flow rate monitoring CEMS. The initial performance test consists of collection of hourly NO_x average concentration, mass flow rate recorded with the certified NO_x concentration and flow rate CEMS and the corresponding acid generation (tons) data for all of the hours of operation for the first 30 days beginning on the first day of the first month following completion of the CEMS

installation and certification as described above. You must assure that the CERMS meets all of the data quality assurance requirements as per §60.13 and Appendix F, Procedure 1, of this part and you must use the data from the CERMS for this compliance determination.

§60.74a Affirmative defense for violations of emission standards during malfunction.

In response to an action to enforce the standards set forth in §60.72a, you may assert an affirmative defense to a claim for civil penalties for violations of such standards that are caused by malfunction, as defined at 40 CFR 60.2. Appropriate penalties may be assessed, however, if you fail to meet your burden of proving all of the requirements in the affirmative defense. The affirmative defense shall not be available for claims for injunctive relief.

(a) To establish the affirmative defense in any action to enforce such a standard, you must timely meet the reporting requirements in paragraph (b) of this section, and must prove by a preponderance of evidence that:

(1) The violation:

(i) Was caused by a sudden, infrequent, and unavoidable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner; and

(ii) Could not have been prevented through careful

planning, proper design or better operation and maintenance practices; and

(iii) Did not stem from any activity or event that could have been foreseen and avoided, or planned for; and

(iv) Was not part of a recurring pattern indicative of inadequate design, operation, or maintenance; and

(2) Repairs were made as expeditiously as possible when a violation occurred. Off-shift and overtime labor were used, to the extent practicable to make these repairs; and

(3) The frequency, amount, and duration of the violation (including any bypass) were minimized to the maximum extent practicable; and

(4) If the violation resulted from a bypass of control equipment or a process, then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and

(5) All possible steps were taken to minimize the impact of the violation on ambient air quality, the environment, and human health; and

(6) All emissions monitoring and control systems were kept in operation if at all possible, consistent with safety and good air pollution control practices; and

(7) All of the actions in response to the violation were documented by properly signed, contemporaneous operating logs;

and

(8) At all times, the affected facility was operated in a manner consistent with good practices for minimizing emissions; and

(9) A written root cause analysis has been prepared, the purpose of which is to determine, correct, and eliminate the primary causes of the malfunction and the violation resulting from the malfunction event at issue. The analysis shall also specify, using best monitoring methods and engineering judgment, the amount of any emissions that were the result of the malfunction.

(b) Report. The owner or operator seeking to assert an affirmative defense shall submit a written report to the Administrator with all necessary supporting documentation, that it has met the requirements set forth in paragraph (a) of this section. This affirmative defense report shall be included in the first periodic compliance, deviation report or excess emission report otherwise required after the initial occurrence of the violation of the relevant standard (which may be the end of any applicable averaging period). If such compliance, deviation report or excess emission report is due less than 45 days after the initial occurrence of the violation, the affirmative defense report may be included in the second compliance, deviation report or excess emission report due after

the initial occurrence of the violation of the relevant standard.

§60.75a Calculations.

(a) You must calculate the 30 operating day rolling arithmetic average emissions rate in units of the applicable emissions standard (lb NO_x/ton 100 percent acid produced) at the end of each operating day using all of the quality assured hourly average CEMS data for the previous 30 operating days.

(b) You must calculate the 30 operating day average emissions rate according to Equation 1:

$$E_{30} = \frac{k \frac{1}{n} \sum_{i=1}^n C_i Q_i}{P_i}$$

(Eq. 1)

Where:

E₃₀ = 30 operating day average emissions rate of NO_x, lb NO_x /ton of 100 percent HNO₃;

C_i = concentration of NO_x for hour i, ppmv;

Q_i = volumetric flow rate of effluent gas for hour i, where C_i and Q_i are on the same basis (either wet or dry), scf/hr;

P_i = total acid produced during production hour i, tons 100 percent HNO₃;

k = conversion factor, 1.194 x 10⁻⁷ for NO_x; and

n = number of operating hours in the 30 operating day period, i.e., n is between 30 and 720.

§60.76a Recordkeeping.

(a) For the NO_x emissions rate, you must keep records for and results of the performance evaluations of the continuous emissions monitoring systems.

(b) You must maintain records of the following information for each 30 operating day period:

(1) Hours of operation.

(2) Production rate of nitric acid, expressed as 100 percent nitric acid.

(3) 30 operating day average NO_x emissions rate values.

(c) You must maintain records of the following time periods:

(1) Times when you were not in compliance with the emissions standards.

(2) Times when the pollutant concentration exceeded full span of the NO_x monitoring equipment.

(3) Times when the volumetric flow rate exceeded the high value of the volumetric flow rate monitoring equipment.

(d) You must maintain records of the reasons for any periods of noncompliance and description of corrective actions taken.

(e) You must maintain records of any modifications to CEMS which could affect the ability of the CEMS to comply with applicable performance specifications.

(f) For each malfunction, you must maintain records of the following information:

(1) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air

pollution control and monitoring equipment.

(2) Records of actions taken during periods of malfunction to minimize emissions in accordance with §60.11(d), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

§60.77a Reporting.

(a) The performance test data from the initial and subsequent performance tests and from the performance evaluations of the continuous monitors must be submitted to the Administrator at the appropriate address as shown in 40 CFR 60.4.

(b) The following information must be reported to the Administrator for each 30 operating day period where you were not in compliance with the emissions standard:

(1) Time period;

(2) NO_x emission rates (lb/ton of acid produced);

(3) Reasons for noncompliance with the emissions standard;

and

(4) Description of corrective actions taken.

(c) You must also report the following whenever they occur:

(1) Times when the pollutant concentration exceeded full span of the NO_x pollutant monitoring equipment.

(2) Times when the volumetric flow rate exceeded the high value of the volumetric flow rate monitoring equipment.

(d) You must report any modifications to CERMS which could affect the ability of the CERMS to comply with applicable performance specifications.

(e) Within 60 days of completion of the relative accuracy test audit (RATA) required by this subpart, you must submit the data from that audit to EPA's WebFIRE database by using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (https://cdx.epa.gov/SSL/cdx/EPA_Home.asp). You must submit performance test data in the file format generated through use of EPA's Electronic Reporting Tool (ERT) (<http://www.epa.gov/ttn/chief/ert/index.html>). Only data collected using test methods listed on the ERT website are subject to this requirement for submitting reports electronically to WebFIRE. Owners or operators who claim that some of the information being submitted for performance tests is confidential business information (CBI) must submit a complete ERT file including information claimed to be CBI on a compact disk or other commonly used electronic storage media (including, but not limited to, flash drives) by registered letter to EPA and the same ERT file with the CBI omitted to EPA via CDX as described earlier in this paragraph. Mark the compact disk or

other commonly used electronic storage media clearly as CBI and mail to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. At the discretion of the delegated authority, you must also submit these reports to the delegated authority in the format specified by the delegated authority. You must submit the other information as required in the performance evaluation as described in §60.2 and as required in this chapter.

(f) If a malfunction occurred during the reporting period, you must submit a report that contains the following:

(1) The number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded.

(2) A description of actions taken by an owner or operator during a malfunction of an affected facility to minimize emissions in accordance with §60.11(d), including actions taken to correct a malfunction.

[FR Doc. 2012-19691 Filed 08/13/2012 at 8:45 am; Publication Date: 08/14/2012]